AUTHOR

TRETLIN, B.L., YANOVA, L.P., SIBIRSKAYA, G.K.,

20-11-40/64

REBINDER, P.A., Member of the Academy.

,我就是我们的现在分词,我们就是我们的人,我们就是我们的人,我们们的人,我们们的人,我们们的人,我们们的人,我们就是我们的人,我们就是我们的人,我们就是我们的人

TITLE

The properties of plastic masses filled with graphite and

the effect produced by high filling. (Svoystva napolnennykh grafitom plastmass i effekt vy-

okogo napolneniya - Russian) Doklady akademii nauk SSSR. 1957, Vol 114, Nr 1, pp 146-148

PERIODICAL

ABSTRACT

(U.S.S.R.) The properties of various materials can, as is known, be considerably improved by the introduction of active fillers.

In the present case the effect produced by graphite as an active filler was investigated in connection with a number of systems. The mechanic strength, heat conductivity, and heat storage were investigated. The results obtained are shown by two drawings. Also the course of the lines showing

the heat-storing capacity is understandable, which proves that at high temperatures the strengthening effect is more

pronounced.

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Technological research work carried out on the basis of this paper proved the correctness of the results obtained

by the investigations. (with 2 drawings)

CARD 1/2

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20-1-40/64. The properties of plastic masses filled with graphite and the effect produced by high filling.

ASSOCIATION:

not given.

PRESENTED BY: -

SUBMITTED:

AVAILABLE:

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CARD 2/2

5.4500(B) 5,3831 6859)

sov/81-59-20-73660

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 20, p 548 (USSR)

AUTHORS:

Tsetlin, B.L., Sibirskaya, G.K.

A CONTRACTOR OF THE PROPERTY O

TITLE:

The Effect of Ionizing Radiation on the Thermal-Mechanical Properties

of Polyethylene 1

PERIODICAL:

V sb.: Deystviye ioniziruyushchikh izlucheniy na neorgan. i organ.

sistemy. Moscow, AS USSR, 1958, pp 344 - 353

ABSTRACT:

Samples of polyethylene (I) of M-60 grade with a thickness of 1.2 mm, 50 and 30 mm in diameter, were subjected to irradiation? in the air by electrons (dose intensity 1.7 x  $10^{17}$ -1.1 x  $10^{19}$  ev/cm³sec, integral doses 3.0 x  $10^{20}$ -1.6 x  $10^{23}$  ev/cm³sec) and by X-rays (dose intensity 1.2 x  $10^{16}$  ev/cm³sec; integral doses  $\sim 10^{21}$  ev/cm³). The curves of the dependence of the value of uniaxial compression and extension of the irradiated samples on the temperature have been obtained. At temperatures below T (melt) of non-irradiated I the shape of the curves did not change after irradiation. Above this temperature the irradiated sample passes into the highly-elastic state with a final module value

Card 1/2

proportional to the dose. The efficiency of the action of radiation on

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The Effect of Ionizing Radiation on the Thermal-Mechanical Properties of Poly-

the thermal-mechanical properties of I is determined by the value of the integral dose. The irradiation of I in vacuum has shown that oxygen at the given dose intensities does not affect the rate of radiation cross-linking of I, because it has no time for diffusing into the sample volume. With an increase in the dose the temperature increases, at which the sample of I breaks under the action of a

A. Litmanovich

Card 2/2

5.3831 5:4500(B)

68957

SOV/81-60-2-7085

Translation from: Referativnyy zhurnal. Khimiya, 1960, Nr 2, pp 546 - 547 (USSR)

AUTHORS:

Tsetlin, B.L., Yanova, L.P., Sibirskaya, G.K., Korbut, V.M.

TITLE:

The Effect of Ionizing Radiation on the Mechanical Properties of Polyvinylchloride and Its Masticated Products

PERIODICAL:

V sb.: Deystviye ioniziruyushchik izlucheniy na neorgan. i organ. sistemy. Moscow. AS SSSR, 1958. pp 354 - 361

ABSTRACT:

The effect was studied of highly-intensive X-ray radiation on the changes in the mechanical properties of industrial vinyplast (V) sheet and masticated (M) products on the base of polyvinylchloride containing dibutylphthalate in the quantity of 10 - 60 weight %. A dismountable X-ray tube with a cylindrical anode of the TRTs type serves as radiation source. In the case of the irradiation of V the doese intensity was 6°10<sup>16</sup> ev/cm<sup>3</sup> sec and the duration of the irradiation from 1 to 50 hours, and in the case of irradiation of M 1.8°10<sup>17</sup> ev/cm<sup>3</sup> sec and 5 hours, respectively. Samples for thermomechanical tests were prepared in the form of disks of 7 mm in diameter and with a thickness of 1 mm, the specific load for V was 10.2 kg/cm<sup>2</sup> and for M 0.8 kg/cm<sup>2</sup>. The following

Card 1/2

### "APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001550420006-8

SIETRSKAYA, G. K.

S/844/62/000/000/050/129

B/87/D507

AUTHORS: Topchiyev, A. V., Vereshchinskiy, I. V.m Glazunov, P. Ya.,
Glushnev, V. Ye., Polnk, L. S., Ryabchikova, G. G., Sibirekaya, G. K., Timofayev, V. D. and Chernyak, N. Ya.
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birekaya, G. K., Timofayev, V. D. and Chernyak, N. Ya.
birekaya, G. K., Timofayev, V. D. and Chernyak, N.

Thermal cracking of ... S/844/62/000/000/050/129

tion-induced processes could therefore be carried out at much lower temperatures (150 - 220°C) than ordinary thermal cracking processes (550 - 600°C). Activation energy requirements also compared favorably (21 kcal/mole as against ~60 kcal/mole for thermal cracking). The yield of gaseous and Hiquid unsaturated compounds increased sharyly with temperatures ~600°C. At temperatures ~600°C the radiation yield became lower. The yield of unsaturated compounds increased shriply with temperature and reached 80% (as against 50 - 55% during ordinary thermal cracking). Optimum conditions for the above process were high doeage irradiation and short contact times. There are 3 figures.

ASSOCIATION: Institut neftekhimicheskogo sintesa, AN SSSR (Institute of Petrochemical Synthesis, AS USSR): Institut fizicheskoy khimii, AN SSSR (Institute of Physical Chemistry, AS USSR).

3/844/62/000/000/051/129 D287/D507

AUTHORS: Spitsyn, V. I., Vereshchinskiy, I. V., Glazunov, P. Ya.,

在中国大学的大学的大学的大学的大学的大学的大学的主义,在1915年,在1915年,1915年

Ryabchikova, G. G. and Sibirskaya, G. K.

TITLE: High-temperature radiolysis of propane

Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-SUBJECT:

mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,

300-311

TEXT: Preliminary results are given of the effects of temperature on the midiolysis of propane-ethane mixtures. The purified propanethane mixture, prepared in the Institut ispol'zovaniya gazov AN USSR (Institute for the Utilization of Gases, AS UkrSSR), freed of CH<sub>4</sub>, olefins and C<sub>4</sub> hydrocarbons, and containing 98% propane at normal pressure, was irradiated with an optimum dosage of a few units x 1015 ev/cm3sec, the temperature being maintained with an accuracy of + 4°C. The radiolysis products (up to C6 hydrocarbons) were analyzed in a chromothermograph XT-2 M (KhT-2N); the weight of Jard 1/2

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3/344/62/000/000/051/129 D237/D507

the samples was 0.25 - 1 mi. The yields were found to increase slightly at  $450\,^{\circ}\text{C}$  and rapidly thereafter. Only temperatures of up to boood were investigated as thermal cracking occurs at higher temperatures (30% at 350°C, 46% at 000°C). Principal products obbained during radiolysis were: Ho, ethylene and propylene, but no Mig at 500°C; the CHA content increased rapidly at higher temperatares. At  $600^{\circ}$ C the following reaction products were obtained: 22%  $H_2$ , 29.5%  $SH_4$ , 40.5%  $C_2H_4$  +  $C_5H_6$  which is approximately the same the products obtained during thermal cracking at 550°C. Investigations on the relationship between the percentage composition of the composition and the time of irradiation at 500°C showed that the products are: H. (180 mol/100 ev), ethylene (160 mol/100 ev) and propylene (135 mol/100 ev). The activation energy for the formation of hydrogen, ethylene and propylene was calculated to be 16 kcal/ mole, i.e. it is approximately equal to that required for thermal cracking. The ratiolysis of propane-ethane mixtures proceeds by a chain reaction. There are 4 figures. AUGUCIATION: Institut Fizicheskoy khimii, AN S. R (Institute of Card 2/2 Physical Chemistry, AS USSR)

RYARCHIKOVA, G.G.; SIBIRSKAYA, G.K.; GLAZUNOV, P.Ya.; GRACHEV, A.I.

Semiautomatic proportioning device for gas chromatography. Zav.lab. 29 no.2:243-244 163. (MIRA 16:5)

1. Institut fizicheskoy khimii AN SSSR.
(Gas chromatography) (Proportioning equipment)

RYABCHIKOVA, G.G.; SIBIRSKAYA, G.K., GLAZUNOV, P.Ya.; GRACHEV, A.I.

Apparatus for selecting gas samples during chromatographic analysis.
Zav.lab. 29 no.2:244 \*63. (MIRA 16:5)

1. Institut fizicheskoy khimii AN SSSR. (Gas chromatography)

PIKAYEV, A.K.; SIBIRSKAYA, G.K.; RYABCHIKOVA, G.G.; GLAZUNOV, P.Ya.

是基础的,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,

Mechanism of hydrogen peroxide formation in a 0,4 M aqueous solution of sulfuric acid at high dose rate of absorption. Kin. i kat. 6 no.1:41-47 Ja-F '65. (MIRA 18:6)

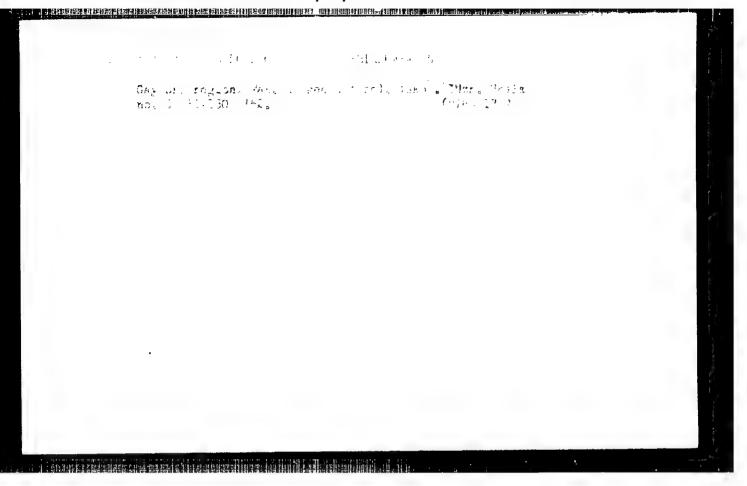
1. Institut fizicheskoy khimii AN SSSR.

SKRIPIL', V.I.; NEDOZH GIN, M.S.; SIBIRSKAYA, N.A.

Bosic geological characteristics of the Gay copper pyrite deposit in the Southern Urals. Mat. po geol. i pol. iskop.

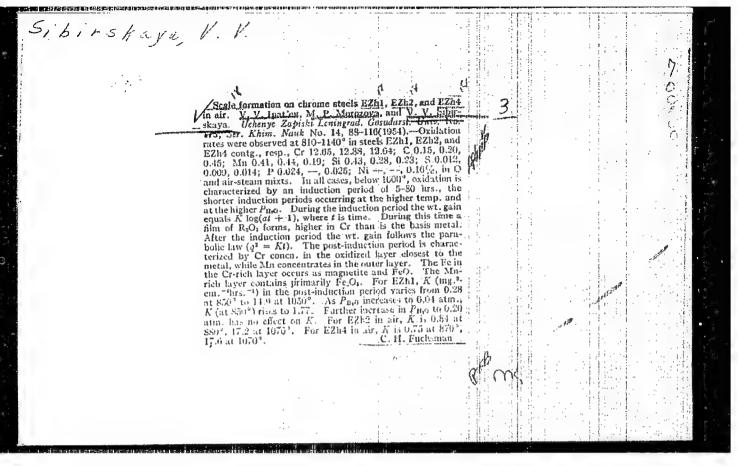
IUzh. Urala no.2:81-93 '60. (MIRA 14:3)

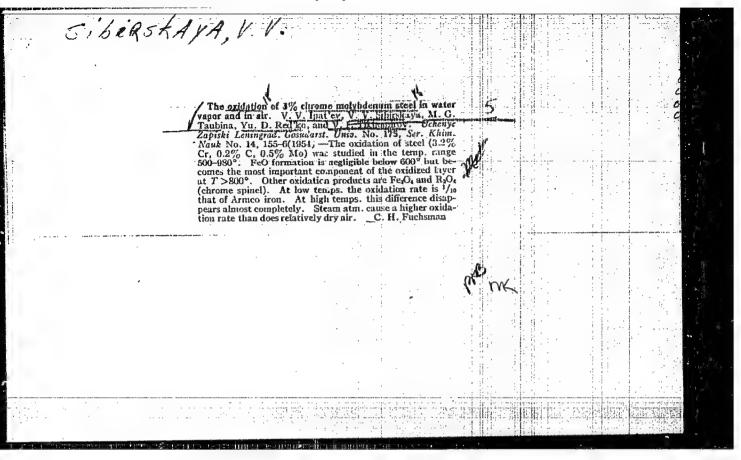
(Ural Mountains—Geology)



Dissertation: "Table Forestion on Hon-Chronic Alloys at High Temperatures in a Clean Atmos, ere." and Cher dig Lamingrad St. 1, Lamingrad, 1953. (Feferativnyy Zhurnal--Hhimiya, 10 mos, "Arr 54)

SC: HFF 243, 10 (et 1054)





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PHASE I BOOK EXPLOITATION

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Leningrad. Universitet

Skorost' okalinoobrazovaniya na metallakh i splavakh (Rate of Scale Formation in Metals and Alloys) Pt. 2. [Leningrad] 1957. 238 p. [Series]: (Its: Uchenyye zapiski, no. 227) [Series]: (Leningrad. Universitet. Khimicheskiy fakultet. Uchenyye zapiski. Seriya khimicheskikh nauk, vyp. 17) 2,150 copies printed.

Resp. Ed.: Tikhomirov, V. I.; Ed.: Shemeleva, Ye. V.; Tech. Ed.: Vodolagina, S. D.

PURPOSE: This collection of articles is intended for scientific workers, engineers and technicians interested in the problem of scale resistance of metals and alloys as well as in the more general problem of kinetics of heterogeneous processes.

COVERAGE: The collection is a continuation of a similar work published in 1954 by the same institution (Uchenyye zapiski IGU, No. 175, 1954). The articles describe experimental and theoretical work on the kinetics of oxidation of iron, manganese and nickel, and of alloys of iron and chromium, nickel and manganese, in various gaseous media. Individual articles are briefly reviewed under Table of Contents, below. No personalities are mentioned.

Card 1/1

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Rate of Scale Formation in Metals and Alloys 545 TABLE OF CONTENTS:		
Introduction		
Ipat'yev, V. V. (Deceased) and Sibirskaya, V. V.  Kinetics of Scale Formation on Iron-chromium Alloys at Elevated  Temperatures in Water Vapor. Structure and Composition of Scale	3	
of various iron-chromium alloys and the structure of the scale.  Five grades of steel, containing 3, 6, 13, 16 and 30 percent chromium, were studied. The structure of the scale was studied with the aid of the micrographic method in conjunction with chemical and X-ray snalyses. The temperature regime varied from 500° to 1300°C. Results of experiments with each type of steel are summarized at the end of the article. There are 21 references, 10 of which are Soviet, 8 English, and 3 German. Ipat'yev, V. V. (Deceased), Ivanova, M. A. and Milyuts, G. B. Scale Formation on 25 Percent Nickel Steel in Air Containing Water Vapor and Sulfur Dioxide		The second secon
ard 2/16	40	

SOV / 137-58-9-19479

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 191 (USSR)

Ipat'yev, V.V., Sibirskaya, V.V. AUTHORS:

On the Kinetics of Scale Formation on Alloys of Iron With TITLE:

A STATE OF THE PERSON OF THE P

Chromium at High Temperatures in an Atmosphere of Water Vapor. Structure and Composition of the Scale Formed (K kinetike okalinoobrazovaniya na splavakh zheleza s khromom pri vysokikh temperaturakh v atmosfere vodyanogo para.

Struktura i sostav obrazuyushcheysya okaliny)

Uch. zap. LGU, 1957, Nr 227, pp 5-47 PERIODICAL:

The rate of oxidation (RO) of Fe-Cr alloys containing 3, 6, ABSTRACT: 13, 16, and 30% of Cr in an atmosphere of water vapor in the

500-1300°C range was investigated. The phase and chemical composition of the scale formed was studied. It is shown that the relationship of the constant of RO to the temperature is expressed by the equation:  $log_{10}K = E/4.575T + B$ , where B is a constant, T is the absolute temperature and E is the apparent activation energy of the process. In the steady-state stage of the process of oxidation the relationship of the gain in weight

of the specimen to time is satisfactorily described by a Card 1/2

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SOV/137-58-9-19479

On the Kinetics of Scale Formation on Alloys of Iron (cont.)

parabolic equation. It is observed that with an increase of Cr content in the alloy RO decreases; the effect of Cr as an alloying additive on the RO of the Fe-Cr alloy decreases with an increase of temperature, with the exception of alloys with 30% Cr. It's shown that in alloys with 3, 6, and 13% Cr. in the abovestated conditions, the scale consists of three layers: An outer layer of Fe<sub>3</sub>O<sub>4</sub>, a middle layer of FeO and, an inner spinel layer (FeO + FeO·Cr<sub>2</sub>O<sub>3</sub>), wherein during oxidation at constant temperature the ratio of the thickness of the lavers in the scale remains the same; the relative thickness of FeO decreases with the decrease of temperature. Micrographic and X-ray investigations and the chemical analysis of the scale of alloys with 3, 6, and 13% Cr showed that the outer layers of Fe<sub>3</sub>O<sub>4</sub> and FeO scale do not contain any Cr, while the inner one consists of (FeO+FeO·Cr2O3); in the alloy with 16% Cr a certain amount of Cr is always present in the outer  $\mathrm{Fe_3O_4}$  layer; in the alloy with 30% Cr the scale has one layer which is close to Cr<sub>2</sub>O<sub>3</sub> in composition. It is shown that with an increase of the Cr content from 3 to 6 and 13% the relative thickness of the layer of FeO, containing no spinel, decreases until its complete disappearance at 16% of Cr in the alloy. It was discovered that during the oxidation of the alloy with 30% Cr at  $< 800^{\circ}$ temperatures, a selective oxidation of Cr takes place. Bibliography: 21 references, 1. Chromium-iron alloys--Scale 2. Water vapors--Metallurgical effects 3. Corrosion--Structural analysis 4. Corrosion--Test results

73-3-5-17/39

AUTHORS:

Grinterg, A. A., Gil'dengershel', Eh. I., Sillippingto, V. V.

TITLE:

II.On the Effect of Animo is in the Outer Sphere Upon the Nature of Substitution Within the Inner Sphere of Complex Compounds (II.D vligania animov vneshney stery na kharakter was same onight vo vnutrenney

sfere kompleksnykh soyedineniy)

PERIODICAL:

Zhurnal Meorganicheskoy Khimii, 1950, Vol 3, Mr 5,

pp 1162 - 1165 (USSR)

ABSTRACT:

The interaction between the isomeric diaminus of tetravalent platinum and ammonia in the presence of sulfale-and phosphate ions was investigated. The results showed that in the presence of SO 2- and PO 3- different products were obtained. Upon

sence of SO<sub>4</sub><sup>2-</sup> and PO<sub>4</sub><sup>3-</sup> different products were obtained.Upon the action of ammonia upon (Pt NH<sub>3</sub>)<sub>5</sub>Cl)<sup>3+</sup> hydromycent-amine forms in the presence of SO<sub>4</sub><sup>2-</sup>. In the presence of

Card 1/2

 ${\rm FO}_A^{3-}$  chloropentamine forms. By means of these emperiments,

74-3-5-17/33

II.On the Effect of Amions Within the Outer Sphere Upon the Nature of Substitution Within the Inner Sphere of Complex Compounds

the state of the property of the state of th

reaction into the inner sphere. .  $\text{CrO}_4^{2-}$  also has the same effect upon the above-mentioned ammonia-cis or-trans  $(\text{Pt MH}_3)_5\text{Cl}^{3+}$  system. From the obtained results, it can be seen that in the presence of  $\text{SO}_4$ -ions and  $\text{CrO}_4$ -ions the substitution process within the inner sphere is very profound. The last chlorine atom is displaced by hydromide. The results showed that the anions within the outer sphere of a complex can cause a certain loosening in the anions of the inner sphere of a complex. There are 8 May 16,1957

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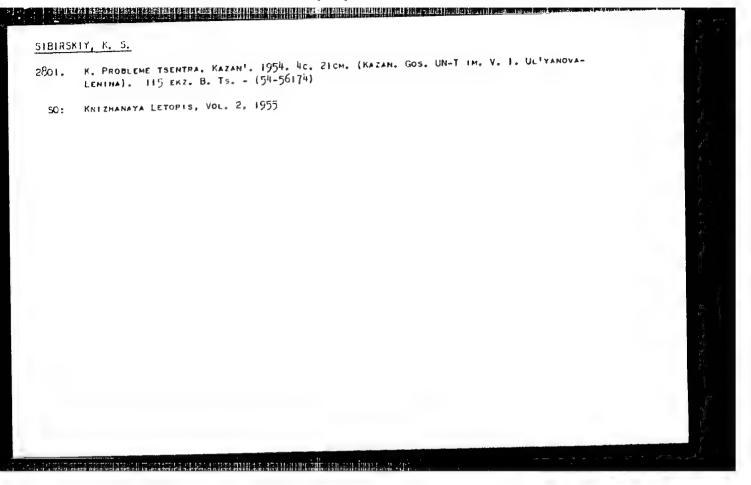
SUBMITTED: AVAILABLE: Card 2/2

1. Complex compounds -- Cubstitution reactions -- Effects of anima

Mixed mothylamine-aumonia platinum pentam in; and its acidic properties. Zaur. neorg. Mixed. 6 no.1:90-94 '61. (NIIA 14:2) (Platinum compounds)

SIBIRSKIY, A.

These workers are famous for their communist work. NTO 4 no.10: 12-13 0 '62. (MIRA 15:9)



SIBIRSKIY, K.S.

USSR/Mathematics - Olympiad

FD-1184

Card 1/1

Pub. 118-25/30

Author

: Itskovich, I. A., and Sibirskiy, K. S.

Title

: School mathematical olympiad in the city of Kishinev

Periodical

: Usp. mat. nauk, 9, No 3(61), 263-265, Jul-Sep 1954

Abstract

: Beginning in the autumn of 1948, a school circle has been active in the physico-mathematical faculty of Kishinev State University; in this circle students of the senior classes in the city schools have heard lectures on mathematics, physics, astronomy, mechanics, and history of science. In the 1952/1953 academic year the students heard reports by: Prof. V. I. Kostin, Docent V. A. Andrunakiyevich, Docent A. S. Bolotin, Docent I. A. Itskovich, Aspirant K. S. Sibirskiy, senior instructor S. A. Freydkin. School olympiads have been held in 1949, 1950, 1952, and 1953. A list of problems posed for the

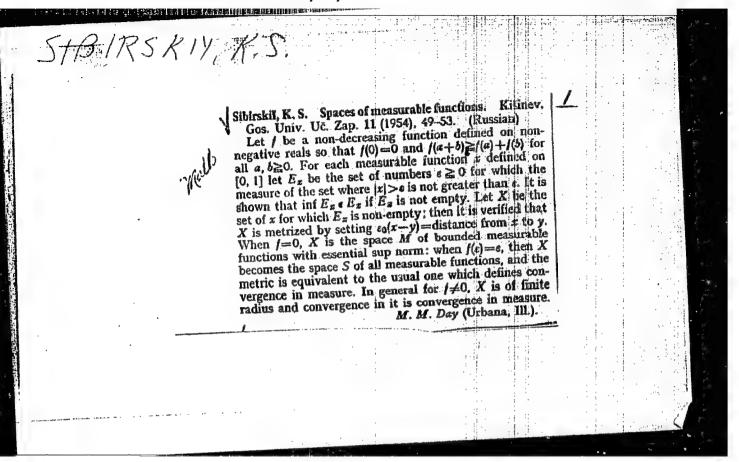
students is given.

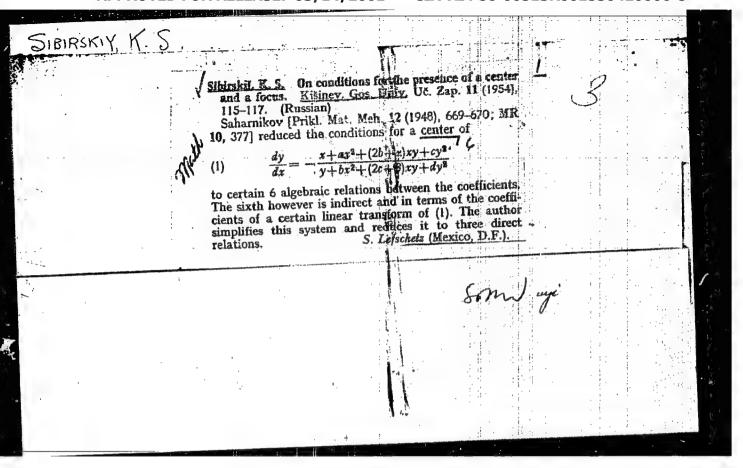
Institution :

Submitted :

"APPROVED FOR RELEASE: 03/14/2001

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Californity, KS.		
,		
	1903. Sibirsky, K. S., The principle of symmetry and the prob- lem of the center (in Russian), Ucb. 2ap. Kisbinevsk. in-14 17. 27-34, 1955; Rof. Zb. Mokb. no. 11, 1956, Rev. 7188. An equation is examined of the form:	
	dy/dx = -Y(x,y)/X(x,y)	
	in which $X(x,y)$ and $Y(x,y)$ are functions, snalytical in the vicinity of the coordinate origin, the series expansion of which commences with terms not below the first order. It is assumed that the characteristic equation	
	Q <sub>n</sub> (cos φ, sin φ) cos φ + P <sub>n</sub> (cos φ, sin φ)sin φ 0 [2]	
	has no real roots.  The following proposition is proved: In order that the field of the linear elements of Eq. [1] shall be symmetrical with respect to the straight line	
	x ain φ y cos φ 0 0 φ [3]	<i>b</i>
	it is necessary and sufficient (and for the presence of a center in Eq. [1], sufficient) that the following identity shall be fulfilled	: 11
·	$X_{1}^{(1)}(x_{1},y_{1},\varphi)Y_{1}^{(1)}(x_{1},y_{1},\varphi) = X_{1}^{(1)}(x_{1},y_{1},\varphi), Y_{2}^{(1)}(x_{1},y_{2},\varphi); \qquad [4]$	
	and the second s	

s/044/61/000/011/024/049 c111/C444

16.6500

Sibirskiy, K. S.

AUTHOR: TITLE:

On the question about the solution of some systems of

trigonometrical equations

PERIODICAL:

Referativnyy zhurnal, Matematika, no. 11, 1961, 50, abstract 11B252. (Uch. zap. Kishinevsk. un-ta, 1960, 54,

21 - 27)

TEXT:

Considered is the system of equations  $a_1\sin k_1\varphi+b_1\cos k_1\varphi=0,$ 

 $a_2 \sin k_2 \varphi + b_3 \cos k_2 \varphi = 0$ , . . . . . . . . . . . . .

 $a_n \sin k_n \varphi + b_n \cos k_n \varphi = 0$ , a, b, a, b, b, being real numbers such that

 $\prod_{1}^{n} (a_{r}^{2} + b_{r}^{2}) \neq 0, k_{1}, k_{2}, \dots, k_{n} -$ 

are natural numbers, and  $\phi$  is a real variable. Necessary and sufficient conditions for the compatibility of this system and a method for the determination of the solutions are given. [Abstracter's note: Complete translation.]

Card 1/1

SIBIRSKIY, K.S.

Uniform approximation of points of dynamically limiting sets and the motions in them. Dokl. AN SSSR 146 no.2:307-309 S '62. (MIRA 15:9)

1. Institut fiziki i matematiki AN Moldavskoy SSR. Predstavleno akademikom P.S. Aleksandrovym. (Aggregates)

SIBIRSKIY, K.S.

liniform approximation of points and the characteristics of motions in dynamically limiting sets. Izv. AN Mold. SSR no.1:38-48 '63.

Centers with symmetry of the field of directions of a differential equation. Izv. AN Mold. SSR no.1:79-83 '63. (MIRA 18:3)

SIBLESKIY, K.S.

Invariants of linear representations of a group of plane rotations and the problem of the center. Dokl. AN SSSR 151 no.3:497-500 Jl '63. (MIRA 16:9)

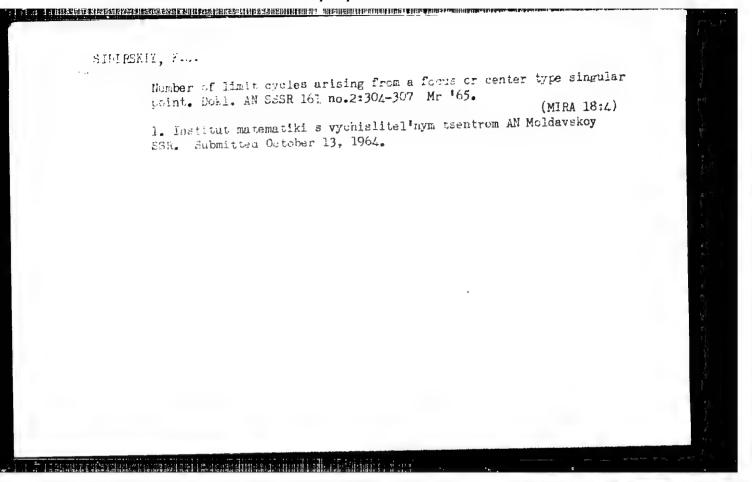
1. Institut fiziki i matematiki AN Moldavskoy SSR. Predstavleno akademikom I.G.Petrovskim.
(Invariants) (Groups of points)

	:				
L 52513-65 EWT(d) Pg-4 IJP(c) ACCESSION NR: AP5012018	· · · · · · · · · · · · · · · · · · ·	UR/0376/65/0	01/001/0053	/0066	
AUTHOR: Sibirs ciy, K. S.	tubbenhood	of a gingular	point B		
TITLE: The number of limit cycles in a source: Differentsial nyye uravneniya,	v. 1, no. 1,	1965, 53-96			
TOPIC TAGS: differential equation, stab	ility	:			
ABSTRACT: Consider the system $-\frac{dx}{dl} = b_{10}x + b_{01}y + \sum_{l+1 \in A'} b_{jl}x^{l}$ $\frac{dy}{dl} = c_{10}x + c_{01}y + \sum_{l+1 \in A'} c_{jl}x^{l}$	1	(1)			

where A' is a finite set of distinct positive integers none equal to 1, j and are nonnegative integers, b<sub>j</sub>, c<sub>j</sub> are real numbers, and x, y, and t are real variables, under the assumption that the characteristic equation

Card 1/2\_

L 52513-65 ACCESSION NR: AP5012018	$\begin{vmatrix} b_{10} - \Lambda & -b_{01} \\ c_{10} & c_{01} - \Lambda \end{vmatrix} = 0$	(2)	
has imaginary roots. After (in the set of coefficients plane (XOY), and letting N(A had by O for points sati N(A') = 5, correcting an err No. 1, 1957, 29-32) and (Uch 67-88). Orig. art. has: 66	satisfying (2)) by the wall of the maximal or sfying (2), the author properties assertion of B. Manaye zapiski Smolenskog formulas.	der of cyclicity which or roves that if A' = (3),	then 114, 1962,
ASSOCIATION: Institut mater s VTs AN Moldavian SSR)	natiki s VTs AN Moldavsko	y SSR (Institute of Mat.	hematics
SUBMITTED: 050ct64	ENCL: 00	SUB CODE: MA	
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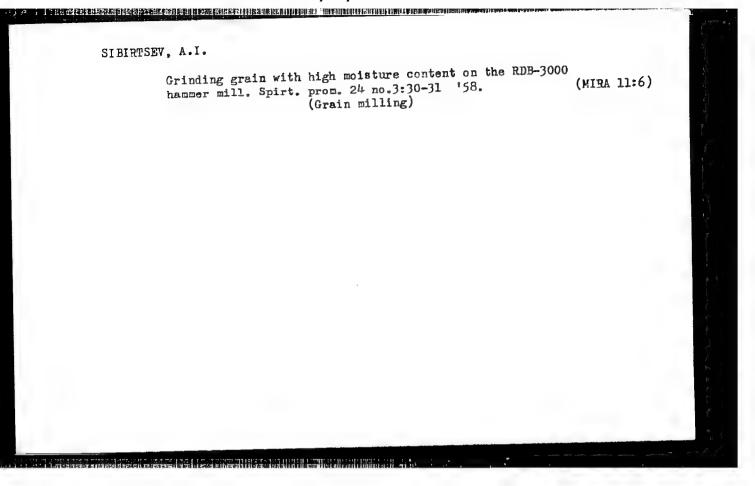


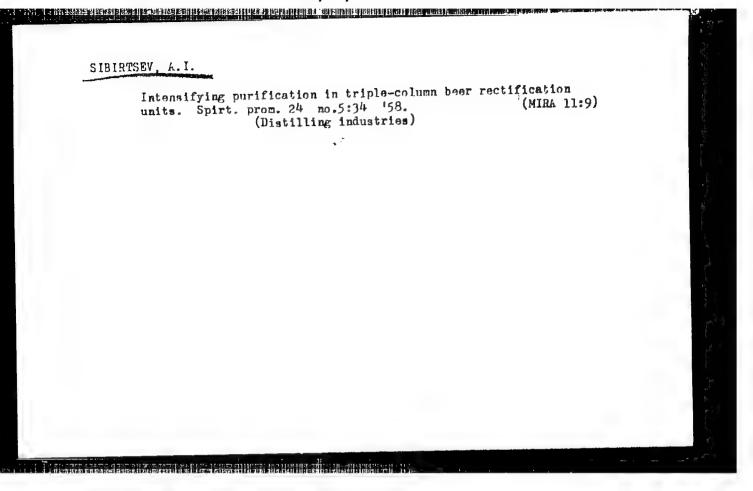
LUNKEVICH, V.A.; SIBIRSKIY, K.S.

Conditions of the center in the case of homogeneous nonlinearities of the third degree. Dif. urav. 1 no.11:1482-1487 N 165.

(MERA 18:12)

1. Institut matematiki s Vychislitel'nym tsentrom AN Moldavskoy SSR i Kishinevskiy politekhnicheskiy institut.





AUTHOR:

Sibirtsev. A.I.

SOV/71-59-2-12/26

TITLE:

Repeated Utilization of Water During Production (Mnogokratnoye

ispol'zovaniye vody v proizvodstve)

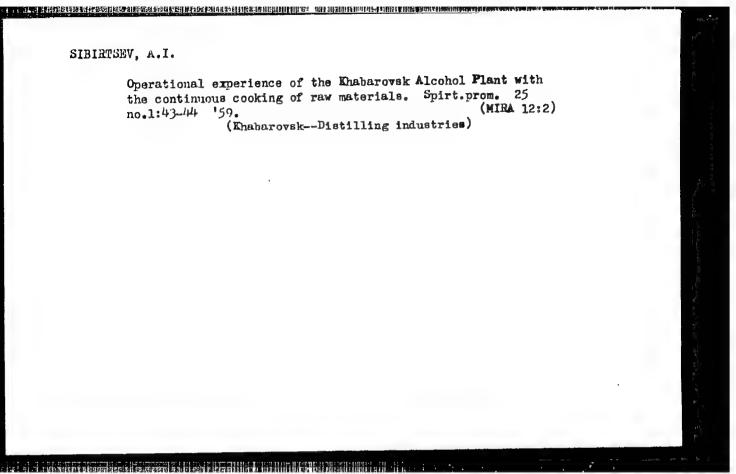
PERIODICAL:

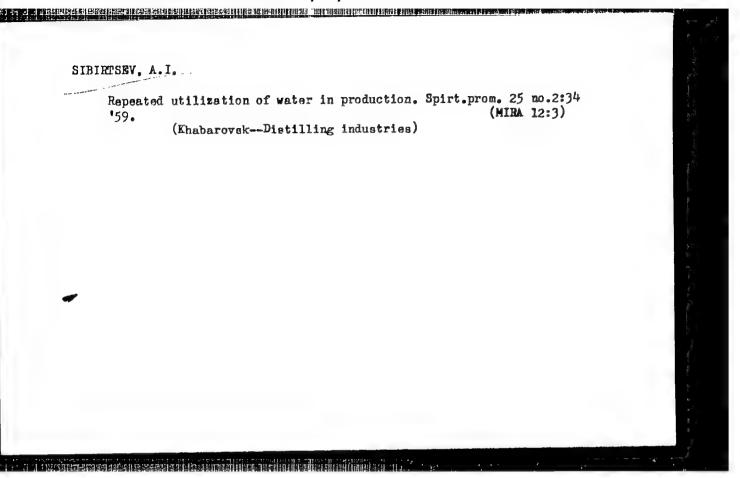
Spirtovaya promyshlennost', 1959, Nr 2, p 34 (USSR)

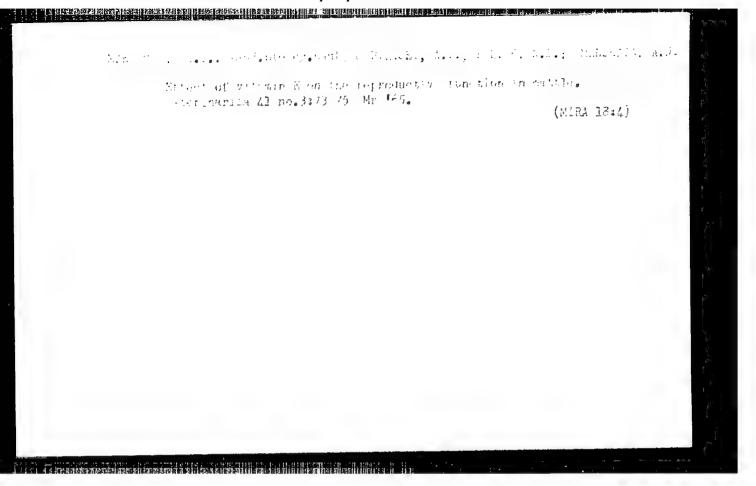
ABSTRACT:

Distilleries are great consumers of water. In places where water is scarce, the question of using water as sparingly as possible, is to some plants of great interest. The Khabarovskiy spirtovoy zavod (Alcohol Plant in Khabarovsk) has designed an additional heat exchanger, consisting of a copper tube covering a surface of 50 m<sup>2</sup> immersed in a water reservoir as shown on the diagram. The cooling water which has been used for various purposes in the plant, is directed to this heat exchanger where it is used again for cooling the saccharified mass entering the copper pipe at 57°C. The water in the reservoir varies in temperature; entering at the bottom at 20°C, it heats up to 42°C and is then drawn off for hydraulic removal of ashes. Half way up the reservoir, the water has a temperature of 23°C, at which point it is drawn off for soak-

Card 1/2







SIBIRTSEV, G.E., zasluzhennyy vrach RSFSR; BEL'SKaYa, T.G.; LAVROVA, K.V.;
YANOVICH, T.D., professor, direktor; KARPOV, S.P., professor, chlen-korrespondent Akademii meditsinskikh nauk SSSR, neuchnyy rukovoditel' Tomskogo instituta vaktsin i syvorotok.

Use of specific bacteriophage in diphtheria therapy. Pediatriia no.2:22-23 Mr-Ap '53. (MLRA 6:5)

1. Tomskiy institut vaktsin i syvorotok. 2. Akademiya meditsinskikh nauk SSSR (for Karpov). (Diphtheria) (Bacteriophage--Therapeutic use)

SIBIRTSEV, N.V., zasluzhennyy vrach RSFSR

Reduction of mortality from acute surgical diseases in Vologda
Province. Zdrav. Ros. Feder. 4 no. 10:20-23 0 '60.

(MIRA 13:10)

1. Glavnyy khirurg Vologodskogo oblzdravotdela.

(VOLOGDA PROVINCE—OPERATIONS, SURGICAL) (ABDOMEN—DISEASES)

SIBIRTSEV, N.V.

Seventieth birthday of Aleksandr Pavlovich TSvetkov, honored surgeon of the R.S.F.R. Vest.khir. no.71141-142 '61.

(MIRA 15:1)

(TSVETKOV, ALEKSANDR PAVLOVICH, 1890-)

SIBIRTSEV, P.

Simplify the issuing of credit and the accounting for loans for private housing construction. Fin. SSSR 21 no.7: 70-74 J1 '60. (MIRA 13:7)

1. Nachal'nik otdela Cherkasskoy oblastnoy kontory Stroybanka. (Cherkassy Province-Banks and banking-Accounting) (Cherkassy Province-Housing-Finance)

STAROSKOL'SKIY, Aleksey Alekseyevich; KRASOVSKAYA, Yekaterina Nikolayevna;
SIBIRTSEV, S.L., retsenzent; GUSEVA, Ye.M., redaktor; MEDVEDEVA,
L.A., tekhnicheekiy redaktor

[Dyeing and finishing of textile and haberdashery goods] Krashenie i
otdelka tekstil'no-galantereinykh izdelli. Moskva, Gos. nauchnotekhn. izd-vo M-va legkoi promyshl. SSSR, 1956. 187 p.

(NIRA 10:5)

(Dyes and dyeing) (Textile industry)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550420006-8"

Sensing and the sense of the se

ARKHIPOVA, T.N., starshiy nauchnyy sotrudnik; KRYUKOVA, A.S.; SIBIRTSEV, S.L.; LEZZHOVA, L.V.

Crease resistant finish for rayon staple fabrics. Tekst. prom. 18 no.11:27-33 N '58. (MIRA 11:12)

1.TSentral'nyy nauchno-issledovatel'skiy institut khlopchatobumashnoy promyshlennosti (for Arkhipova). 2.Nauchnyy rukovoditel' gruppy Mauchno-issledovatel'skogo instituta organicheskikh poluproduktov i krasiteley im. K. Voroshilova (for Kryukova). 3.Glavnyy inzh. Pervoy sitsenabivnoy fabriki (for Sibirtseva). 4.Nachal'nik laboratorii Pervoy sitsenabivnoy fabriki Moskovskogo gorsovnarkhoza (for Lezzhova).

(Textile finishing) (Rayon)

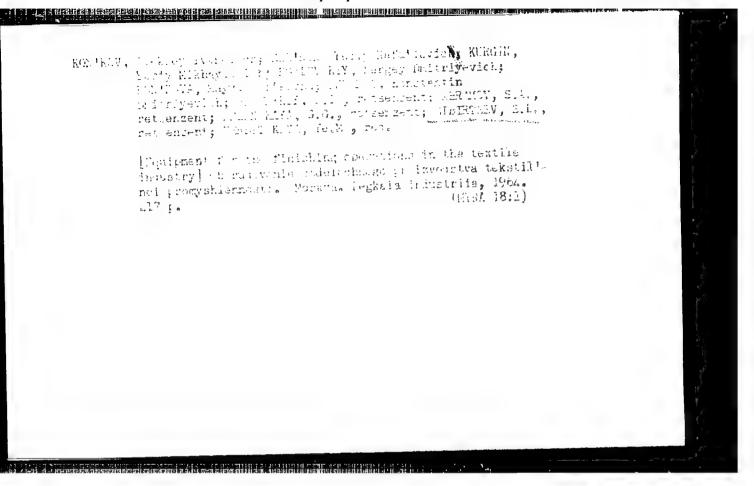
SIBIRTSEV, S.L.

New machines, machine units and continuous production lines for textile finishing. Tekst.prom. 21 no.7:45-48 Jl '61. (MTRA 14:8)

1. Starshiy ekspert Gosudarstvennogo komiteta Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu.

(Textile finishing) (Textile machinery)

(Assembly-line methods)



3(4) AUTHOR:

Sibirtsev V. D.

sov/6-59-8-18/27

TITLE:

A Nomograph for Corrections Necessitated by the Inclination of the Vertical Axis of the Instrument (Nomogramma dlya popravok za naklon vertikal noy osi vrashcheniya instrumenta)

PERIODICAL:

Geodeziya i kartografiya, 1959, Nr 8, pp 66-67 (USSR)

ABSTRACT:

The corrections necessitated by the inclination of the vertical revolution axis of an instrument are introduced to the measured directions according to tables calculated by means of formula (1). Since the use of these tables is complicated a nomograph has been developed which is presented and briefly explained in this article. Formula (2) is derived, from which the scale for the correction accuracy was calculated. There is 1 figure.

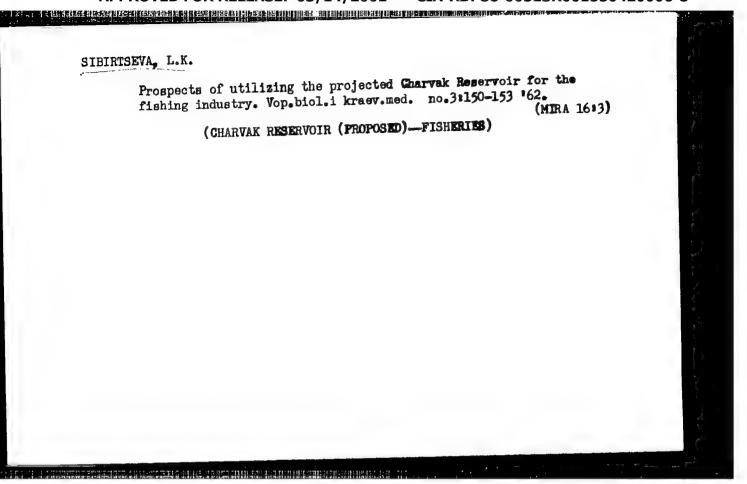
Card 1/1

SIBIRTSEV, Ya.M. ; PROKPCHUK, B.I.

and the second second and the second second

Recent data on the age of kimberlites of the northeastern part of the Siberian Platform in the Kupyka Basin. Dokl. AN SSSR 148 no.2: 431-432 Ja 163. (MIRA 16:2)

Vsesoyuznyy aerogeologicheskiy trest. Predstavleno akademikom
 Shcherbakovym.
 (Kuoyka Valley—Kimberlite)



Metaylietr lecancic hold

Synthesis of la-metacxy-3-methyltetradecancic acid and its analogs, initial substances for the preparation of macrocyclic betones and lactones. Dokl. AN SEGR 34 No. 4, 1952.

Monthly List of Mussian Accessions, Library of Congress, Cotober 1952. Unclassified.

SIBIRTSEVA, V.Ye.; BELOV, V.H.

Production of 2-octyn-1-ol from 1-heptyne by the Reppe method.
Trudy VNIISMDV no.4:50-52 '58. (MIRA 12:5)

(Octynol)

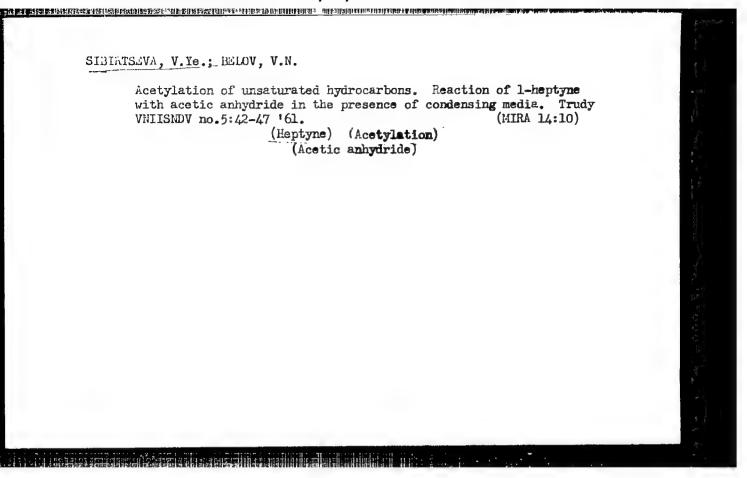
STBIRTSEVA, V.Ye.; VIREZUB, S.I.; KUSTOVA, S.D.

Odorous substances from sclareol. Report No.1: Ambriel and ambroxido. Trudy VNIISNDV no.5:9-14 '61. (MIRA 14:10) (Odorous substances) (Sclareol)

SIBIRTSEVA, V.Yo.; BELOV, V.N.

Synthesis of the methyl ester of heptenecarboxylic acid from 1-heptene by means of 2-octyn-1-ol. Trudy VNIISNDV no.5: 40-42 161. (MIRA 14:10)

(Heptene carboxylic acid)



SIBIRTSIVA, V.Ye., inzb.; KUSTOVA, S.D., kand.khimicneskikh nauk;
KOCTICAE, G.Y., inzb.; EMERICOVITSERYI, I.S., inzb.

Industrial method of preparing ambrial (bicyclohomofarnesal).
Masl. - zhir. prom. 27 no.12:31-32 D '61. (KIRA 14:12)

1. Voccoyuznyy nouchno-issledovatel'skiy institut sinteticheskikh i natural'nykh dushistykh veshchestv (for Sibirtseva, Kustova).

2. Voccovskaya kosmeticheskaya fabrika (for Kogenman, Lakanovitskaya).

(Farnetal)

SIBIRTSOVA, L.K.; KISELEVA, Ye.V.; ABDULLAYEV, M.A.

Hydrobiological characteristics of the upper Zeravshan River.

Trudy UzCU no.110:97-110 '61. (MIRA 15:3)

(Zeravshan River--Hydrobiology)

USSR/General and Specialized Zoclogy - Insects.

接受支援<del>的第三人称形式,以外的特别的一种的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人</del>的人们的人们的人们也是一种人们的人们的人们的人们的人们的人们

P.

Abs Jour

: Ref Zhur - Biol., No 9, 1958, 40109

Author

: Sibiryak, L.A.

Inst

: Tomsk University.

Title

: The Specialization in Nutrition of the Cabbage Fly (Hylc-

mia brassicae Bouche).

Orig Pub

: Tr. Tomskogo un-ta, 1956, 142, 231-236.

Abstract

The fly did not damage the mustard, the edible brown mushroom, and the shepherd's purse of the mustard family. The
flies visited the crushed leaves of the cauliflower, radishes, and nasturtium more often than the leaves of Brussels sprouts and late Moscow cabbage, and did not visit
the red head cabbage at all. Cabbage in the phase of four
real leaves was infected by the aggs of the fly more than

cabbage in the phases of two and seven leaves.

Card 1/2

- 42 -

washaning consumment in the contract of the

BOBROV, A.R.; SIBIRYAKOV, A.A.; AKATNOV, I.N.; BIL'IM, A.E.; KOZIN, A.I., GROSMAN, I.S.; BASKAKOV, A.I.; YATSYSHIN, A.M.; TRUNOV, A.F.; KUTUZOV, N.L.; VICHIK, Ya.B.; CHUMBAROVA, A.A.; PRYAKHIN, R.I.; ZINOV'YEV, N.I.; MIKHAYLOVA, S.I.

Georgii Alekseevich Uarov. Muk.-elev.prom. 21 no.1:31 Ja '55. (Uarov, Georgii Alekseevich, 1898-1954) (MIRA 8:5)

SIBIRYAKOV, A.N. (L'vov, ul. Iv.Franko, d.40, kv.5)

Gytological diagnosis of cervical caner [with summary in English].
Vop.onk. 2 no.3;346-349 '56. (MERA 9:10)

1. Iz L'vovakogo oblastnogo onkologicheskogo dispansera (glavn. vrach - V.L.Kramchaninova, nauchn.rukovod. - doktor med. nauk prof.
G.P.Kovtunovich)

(GERVIX NEOPLASMS, diag.
cytol., veginal smears, statist.)

(VAOINAL SMEARS, in various dis.
cancer of cervix, statist.)

SIBIRYAKOV, A.N. (L'vov, ul. Franko, d. 40/5)

Treatment for cancer of the lip. Nov. khir. arkh. 5:48-51 S-0 '58.

(MIRA 12:1)

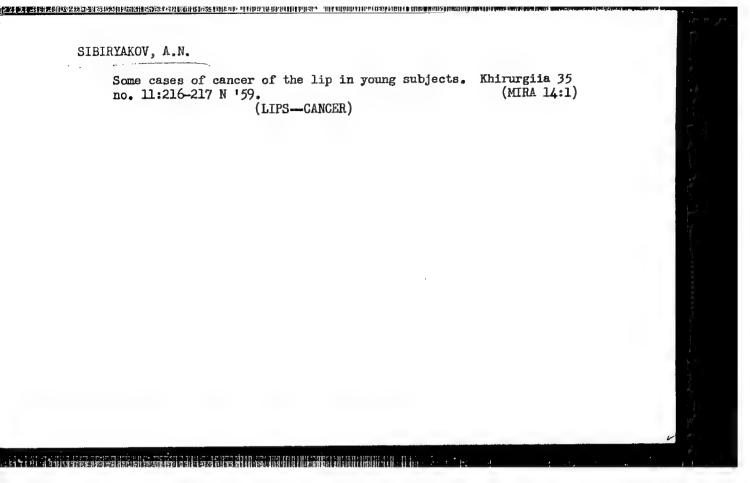
1. L'vovskiy oblastnoy onkologicheskiy dispanser (manchnyy rukovoditel' reboty - prof. G.P. Kovtunovich).

(LIPS--CANGER)

evaluation of method of cytological diagnosis of corvical house." Livov, 1959, 15 pp (Min of Health ROFFER. Kazan! State Med Inst) 250 codies (KL, 34-59, 118)

**经营业的企业公司**的价格和企业的企业的企业的企业的企业,但是一个企业,但是一个企业的企业,但是一个企业的企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业,但是一个企业的企业。

- 109 -



BIRING AKEY A.P.

3-3-10/40

AUTHORS:

Sibiryakov, A.P., Dotsent, and Kovalenko, K.N., Dotsent

TITLE:

Problems of Instruction in "Machine Parts" (Voprosy prepo-

davaniya kursa "Detali Mashin")

PERIODICAL:

Vestnik Vysshey Shkoly, March 1957, # 3, p 48-51 (USSR)

ABSTRACT:

The authors express their dissatisfaction with the organization and method of instructing the subject "Machine Parts". They point out that the various teaching plans for this subject, vary from 14 to 102 hours, and that there is a lack of correlation between the number of hours allowed for lectures and practical training. In the authors' opinion the number of hours for both types of training should correspond. They also say that the course extends over an excessive number of semesters and claim that the teaching plans are changed almost every year while the programs remain the same continuously. They ask that instructors be assigned to lead student practical training, that a manual of instruction on "Machine Parts" be prepared, and they complain about the

Card 1/2

lack of training aids for instructional purposes.

ACCESSION NR: AP4045261

5/0209/64/000/008/0079/0083

AUTHOR: Petrov, V.; Sibiryakov, G.

TITLE: A typical communications session

SOURCE: Aviatsiya i kosmonavtika, no. 8, 1964, 79-83

TOPIC TAGS: space flight, space communication, space center, space probe, telemetry, quided missile, remote control, satellite

ABSTRACT: In a popular and lively form, the authors describe the operations of the communications unit of a modern space center. Step by step, with many simplifications and with pertinent technical detail largely omitted, they take the reader through an operational communications center in actual contact with an orbiting manned satellite. The spacecraft in question are not specifically mentioned, and it may be assumed that the authors are attempting to present a more or less typical, composite view of the communications aspect in modern space exploration. Special attention is directed at a simple explanation of communications requirements for the various types of space probes and flights which are currently being carried out. There is some mention of specific equipment, but with almost no technical detail or information on performance. Telemetry, guidance and control come in for brief mention. Some idea of the overall structural organization

法 是还是 最高 医进行系统 行行,如 使者 如 我们们来说话,这样就明明她就知道,这个女子的话,我们也不是一个女子,也是自己的人们的 经约约日本自己的证明。——这样也对她的时间,在这样是这种的人

L 24805-66 FSS-2/EWT(1)/EWP(m)/EEC(k)-2/EWA(d)
ACC NR: APEOLLOGO TT/DD/GW SCTB AP6011062 SOURCE CODE: UR/0004/66/000/003/0008/0009 AUTHOR: Sibiryakov, G. ORG: none G TITLE: To the nearest planets. When? On what ship? SOURCE: Znaniye - sila, no. 3, 1966, 8-9 TOPIC TAGS: Mars Venus VI tion parachute, the money apoce flight, space of trenty, soft looking, reentry aquipment ABSTRACT: Specialists studying the problem of flights to Mars and Venus are of the opinion that a landing can best be performed using parachutes rather than retroengines. During the first phase of the landing operation, a relatively small parachute will open at supersonic velocity and stabilize the ship; during the second phase, one or several large parachutes, acting together with retroengines, will ensure a soft landing. It is proposed that the second-phase parachutes be made of special heat-resistant nylon, silk, or mylar (as used in Echo 2). The flights will start from orbiting launch platforms; according to Yu. Kondratyuk's proposal-from a circumlunar platform. A manned spaceship must possess one excursion module for landing on and launching from the planet, and another module, for atmospheric reentry. The opposition of the planets has to be considered if manned flights are being planned Card 1/2 

ACC NR: AP60110 ne best launching Idering a flight	62 g time will be 3—4 mont to Mars, this will be e	ths before the pievery 25.6 months	Lanets' opposit . Orig. art.	has: 4 figures.	
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Card 2/2					. [

New diversion of American militarists. Priroda 52 no.7:109-111
J1 '63.

(United States-Outer space-Exploration)

SeV/117-59-6-32/33

AUTHOR: Sibiryakov, L.Te., Accountant General

TITLE: A Useful Book

Mashinostroitel', 1359, Nr 6, pp 47-48 (USSR) PERIODICAL:

ABSTRACT: This is a critical review of the book "Balans v upra-

vlenii zavodom" ("The Accounts Balance in Plant Management"), by I.A. Usatov, Mashgiz, 1958.

\_ASSOCIATION: Moskovskiy transformatornyy savod (Moscow Frans-

former Plant)

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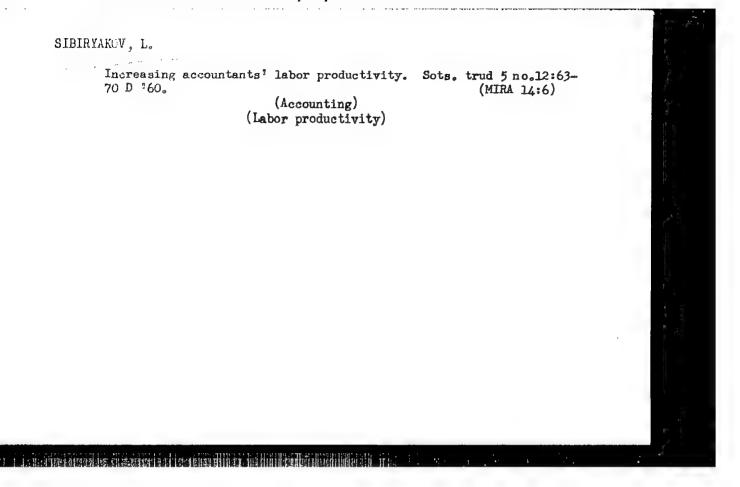
ALEKSANDROVSKIY, Andrey Petrovich; KANE, M.Yu., dotsent, retsenzent; SIBIRYAKOV, L.Ye., ekonomist, retsenzent; BOGINSKIY, M.N., inzh.-ekonom., red.; TKACHUN, A.I., red.izd-va; SMIRNOVA, G.V., tekhn.red.

[Economic control of the work of a machinery manufacturing enterprise] Ekonomichaskii kontrol raboty mashinostroitel nogo predpriiatiia. Moskva, Gos.nauchno-tekhn.imd-vo mashinostroit. lit-ry, 1960. 263 p. (MIRA 13:12)

(Machinery industry--Accounting)

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THE PROPERTY AND THE RESERVE OF THE PROPERTY O



SIBIRYAKOV, Leonid Yefimovich; VEYTSMAN, N.R., prof., red.; TATUR, S.K., prof., red.; SHCHENKOV, S.A., prof., red.; IVANOV, N.N., red.; TITOV, K.M., red.; NIKOL'SKIY, A., red.; TELEGINA, T., tekhn.red.

[Accounting for the utilization of materials in production]
Uchet ispol'zovaniia materialov v proizvodstve. Moskva, Gosfinizdat, 1961. 81 p. (MIRA 15:4)
(Accounting) (Materials)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550420006-8"

ARTEMOV, Yu.M., kand. ekonom. nauk; GAL'PERIN, N.S., kand. ekon. nauk; GUBIN, B.V., kand. ekon. nauk; ZHUKOV, V.N., kand. ekon. nauk; OCHKOV, M.S. kand. ekon. nauk; OSKORDOV, V.P., starshiy ekonomist; BARNGOL'STS, S.B., dotsent, kand. ekon. nauk; SIBIRYAKOV, L.Ye.; IVANOV, N.N.; RABINOVICH, M.A., ekspert; LIPSITS, V.B., kand. ekon. nauk; VOLKOV, S.I., kand. ekon. nauk; KOROLEVA, Ye.P., aspirantka; RYUMIN, S.M., red.; SUBBOTINA, K., red.; TELEGINA, T., tekhn. red.

[Planning and calculating the cost of industrial production] Voprosy planirovaniia i kal'kulirovaniia sebestoimosti promyshlennoi produktsii. Moskva, Gosfinizdat, 1961. 183 p. (MIRA 14:8)

1. Moscow. Nauchno-issledovatel'skiy firansovyy institut. 2. Sotrudniki Nauchno-issledovatel'skogo firansovogo instituta (for Artemov, Gal'perin, Gubin, Zhukov, Ochkov, Oskordov). 3. Vsesoyuznyy zaochnyy firansovo-ekonom. institut (for Barngol'ts).4. Glavnyy bukhgalter Moskovskogo elektrozavoda (for Sibiryakov). 5. Starshiy konsul'tant Upravleniya bukhgalterskogo ucheta Ministerstva firansov SSSR (for Ivanov, Rabinovich). 6. Nachal'nik podotdela obshchikh ekonomicheskikh voprosov tsenoobrazovaniya Byuro tsen pri Gosplane SSSR (Lipsits). 7. Moskovskiy ekonomiko-statisticheskiy institut (for Koroleva)

(Costs, Industrial)

SIBIRYAKOV, M. A. Col. of Med. Ser.

"BASIC PROBLEMS IN HYGIENIC SERVICE TO THE TROOPS DURING THE FIELD TRAINING".

Voyenno-meditsinskiy zhurnal No. 8, 1955, pp. 48-52.

The author speaks of the effect of heavy load and physical stress, clothing, water drinking, snaitation, and other related matters of importance during hikes and field exercises.

Translation-D527584.

SIEIRYAKOV, M.A., polkovnik meditsinskoysluzhby, kandidat meditsinskikh
nauk

Sanitary and bacterilogical examination of water and food. Voen.med.zhur. no.9:49-54 S \* 56.

(WATER-HACTERIOLOGY)

(FOOD ADULTERATION AND INSPECTION)

RATEAUZ, L.G.; SIBIRYAKOV, M.A.

Fifteenth session of the Academy of Medical Sciences of the USSR. Voen.-med.zhur. no.9:90-93 S '61. (MIRA 15:10) (MEDICINE)

86-8-21/22

AUTHOR:

Sibiryakov, S.N. Col.

TITLE:

A Book Review: "Airplane Crew in Deserted Area after Forced Landing", (Deystviya ekipazha samoleta v bezlyudnoy mestnosti) by N.K. Pyneyev; retired Maj. General of the Soviet Air Force, Moskva, 1957, published by the Ministry

of Defense, USSR.

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PERIODICAL: Vestnik Vozdushnogo Flota, 1957, Nr 8, pp.90-91 (USSR)

ABSTRACT:

The reviewer starts with the following description of the author of the book: Maj. General N.K. Pyneyev, retired, served in Aviation more than 30 years. During the war he was chief of staff of the Air Army, and afterwards he served for a long time on the General Staff of the Soviet Air Force. Now, being in retirement, N.K. Pyneyev writes and edits books and actively participates in social work. Quite recently he was elected chairman of the Historical Section of the House of Aviation [and also of the Anti-aircraft Defense] which bears the name of Frunze. Further, the critic gives the following characteristic of the book: It comprises an introduction and 4 parts [195 pages]. The subject of the book is the possible action of the airplane crew after a forced landing, or parachuting in

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A Book Review: "Airplane Crew in Deserted Area after Forced Landing" (Cont.)

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deserted area, far from inhabited regions and airfields. and also after forced landing or parachuting on the sea. The book also deals with the problems of search and rescue operations of an aircraft after it failed to return to its airfield. The reviewer asserts that this is the first book of this kind in Soviet Aviation Literature and it supplies the basic minimum useful information on the subject for flying personnel. In particular, the book describes the preparation of the crew before a forced landing or abandonment of the airplane and the action after landing. Even though the author of the book repeats some regulations already established by instructions concerning forced landing operations and parachute landing, the reviewer considers it useful because the commentaries of the author contain many practical suggestions. In a condensed form, the author of the book clearly presents, according to the critic, the methods of orientation in the terrain and establishing communication with the airfield, after forced landing. Analyzing the cases of forced landing or abandonment of the airplane in the Arctic, the Tayga, or in wooded.

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A Book Review: "Airplane Crew in Deserted Area after Forced Landing" (Cont.)

swampy, deserted and mountainous areas, the author of the book supplies many practical and useful recommendations as to the possibilities of survival for the crew. of the book separately describes the cases of forced landing or parachuting on the sea. The book includes a chapter which deals with the search and rescue operations undertaken by the command in case of failure of the airplane to return to its airfield. It describes the methods of the search by airplanes and by ground search parties. The reviewer believes that the book is edited handsomely and contains a large number of illustrations, which facilitate the reading of the text. But, says the reviewer. the book also contains a series of shortcomings, which are as follows: It is not correct to suggest that the crew of the airplane, before forced landing or parachute jump, should in all cases report to the air commander and await orders from him. This may be advisable under conditions of flight close to the airfield, or over the territory of a district, but not in a long distance flight. According to the reviewer the crew in disaster should send a distress signal to the nearest air force command post

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A Book Review: "Airplane Crew in Deserted Area after Forced Landing" (Cont.)

which controls or surveys the flight. Another shortcoming, according to the reviewer, is the author's recommendation with regard to the amount of equipment which a crew in distress should carry before the forced landing or abandonment of the aircraft. The reviewer believes that this amount is exaggerated and will be a hindrance, particularly in the case of an ejection seat parachute jump. The signals of distress recommended by the author of the book [by signal panels, parachute canopy and by movement of the body] should be avoided [in the opinion of the reviewer] because these signals are uniform for all aviation and are already established by competent authorities, which control flights over the territory of the USSR. In the chapter: "Forced Landing and Parachuting on Sea" the author of the book disregards such necessary problems as the order of airdrop of rescue equipment, on the basis of the calculation of the wind and drift, as the methods of directing ships and cutters to the place of disaster by the airplanes of the rescue service, and also the methods by which the areas of water covered by flaming fuel can be avoided. In the

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A Book Review: "Airplane Crew in Deserted Araa after Forced Landing" (Cont.)

chapter which deals with the search service, the author omitted the radio aids which can considerably increase the effectiveness of search service. Consequently, he indicates only the altitude of observation (500-600 m for airplanes, and 200-300 m for helicopters) necessary for visual search, whereas the altitude for search with radio aids must be at least 1000 m, and with increase of this altitude, the radius of search operations will also be considerably increased. Finally, the reviewer reproaches the author of the book for the errors in terminology [according to the reviewer, in the Soviet terminology the term "base" belongs rather to the navy, not to aviation], inaccurate explanation of the Gulf Stream currents and serious stylistic blunders. However, in total, says reviewer - the book is useful.

ASSOCIATION: Frunze House of Aviation [and Antiaircraft Defense],

Historical Section.

AVAILABLE: Library of Congress

Card 5/5

sov/147-59-2-9/20

AUTHOR:

Sibiryakov, V.A.

TITLE:

Solution of Orthotropic Conical Shells Under an

Arbitrary External Loading by the Method of V.Z.Vlasov

(Raschet ortotropnoy konicheskoy obolochki na

proizvol'nuyu vneshnyuyu nagruzku po metodu V.Z.Vlasova)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya

tekhnika, 1959, Nr 2, pp 72-82 (USSR)

ABSTRACT:

The aim of this paper is to obtain equations giving the stresses of the elastically strained and deformed conical shells, such as are used for the nose of a rocket, for the case of non-axi-symmetrical types of loading. Using cylindrical coordinates, as shown in Fig 1, the equations of equilibrium of an element of the shell are given by Eq (1) - see Ref 1 - where:

z and 0 - the cylindrical coordinates;

r = kz - the radius of the cross-section of the shell;

k = tan - tangent of the semi-vertical angle;

 $A = \sqrt{1 + k^2} - coefficient;$ 

Card 1/4 N<sub>1</sub> and N<sub>2</sub> - elastic normal loadings;

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Solution of Orthotropic Conical Shells Under an Arbitrary External Loading by the Method of V.Z.Vlascv

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S and  $M_2$  - tangential loading and bending moment, respectively;

 $Q_1$  and  $Q_2$  - shearing forces;

X, Y and Z - components of the full load vector - the positive sense of the loads and deformations is indicated in Fig 2.

Following Ref 2, these equations are transformed by a substitution  $z=z_0e^{kt}$  to Eq 2. Relating now stresses and strains (Eq 3) and expressing the strains as components of the total deformation vector (Eq 4) and considering the cases when shear deformation is absent Eq (5) and (6) are obtained, which with the additional condition  $\varepsilon_2=0$  lead to Eq (8), being the differential equation for displacement. This is solved by successive approximations, the results being expressed by Bessel functions with complex arguments (Thompson functions) Eq (13) to (16). Some examples are then solved taking the external loading as shown in Fig 3 and the conical shell as shown

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in Fig 4. Only the secondary stresses are considered, further approximations being shown by preliminary analysis to be unnecessary. In the first example, the shell is considered to be a cantilever fixed at the right (butt) end and closed at the left end by a diaphragm. Figures 5 and 6 give the results of the computations. In the second example, the shell is the same but at the free end there is either rigid rib, but with poor bending characteristics, or a massive tip welded to the shell. Figures 7 and 8 give the results of computations for this case. In conclusion it is shown that the distribution of normal stresses along a generator agrees qualitatively with the results obtained by V.F.Kut'inov (Ref 4) for a

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Solution of Orthotropic Conical Shells Under an Arbitrary External Loading by the Method of V.Z.Vlasov

caisson of small conicity. There are  $\vartheta$  figures and 5 Soviet references.

ASSOCIATION: Moskovskiy aviatsionnyy institut, Kafedra stroitel'noy mekhaniki samoleta (Moscow Institute of Aeronautics, Chair of Theory of Aircraft Structures)

SUBMITTED: January 5, 1959

Card 4/4

SIBIRYAKOV, V. A., Cand Tech Sci -- (diss) "Calculation of orthotropic shells under the effect of temperature and arbitrary external load." Moscow, 1960. 9 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin Aviation Inst im Sergo Ordzhonikidze); 160 copies; price not given; (KL, 17-60, 159)

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AUTHOR:

Sibiryakov, V.A.

TITLE:

The Determination of the Temperature Stresses in a

Conical Shellylo

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya

tekhnika, 1960, Nr 1, pp 72-82 (USSR)

ABSTRACT: At the basis of the calculation is the idea of Professor V. Z. Vlasov that the internal stresses in a thermoelastic

free shell can cause only that part of the temperature loading which corresponds to the bimoment state of the The following assumptions are made: 1) deformation takes place in the elastic domain; 2) general and local losses of stability are absent; 3) Young's modulus and the coefficient of linear expansion of the material are constant; 4) the temperature through the thickness of the shell is constant; 5) the law of heating of the sections along the length of the shell is unchanged, only the "amplitude of heating" changes. The stressed and

deformed state of an orthotropic conical shell is determined on the basis of the semimomentless shell theory. Card 1/3

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The Determination of the Temperature Stresses in a Conical Shell

The equilibrium equation and Hook's law are supplemented by equations relating the full deformation with the components of the vector of the full displacement and equations linking the full elastic and temperature deformations, in accordance with F. Neyman's hypothesis. The equations are simplified if the assumption is made that the contour of the transverse section of the shell is inextensible. Trigonometric series are assumed for the forces, moments, displacements and the temperature. In this way the partial differential equations reduce to a single fourth order ordinary differential equation, which is solved by the method of successive approximations. Since an error occurred in the earlier paper (Ref 3), the full system of equations for the constants of integration are given. The distribution of the normal stresses along the generator for which 8 (cylindrical coordinate) is zero is considered for various temperature distributions. The effect of the

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AUTHOR:

Sibiryakov. V. A.

TITLE:

On the solution of a differential equation with variable

coefficients

PERIODICAL: Vysshiye uchebnyye zavedeniya. Izvestiya. Matematika,

no. 4, 1962, 143-145

TEXT:

In order to solve the equation

$$\frac{d^4v}{dt^4} - (k^2 + be^{-2kt}) \frac{d^2v}{dt^2} + ae^{-2kt}v = 0$$
 (1)

appearing in the theory of the conic basins, one writes down the auxiliary equation

$$v_n^{IV} - k^2 v_n'' = + (bv_{n-1}'' - av_{n-1}) e^{-2kt}$$
 (2)

and puts its right linear part equal to zero. Out of this comes the initial approximation v for the general solution

Card 1/+

On the solution of a differential ... S/140/62/000/004/008/009  $v = \sum_{i=1}^{4} c_i F_i$  of (1). This  $v_o$  is substituted into the right hand, and

i=1 i i o corresponding particular solution of (2) gives together with v the next approximation for v. This way one states that there is

$$F_1 = 1 + \sum_{1}^{\infty} \frac{(-1)^n v^{4n} e^{-2nkt}}{2n! (2n+1)!} \prod_{1}^{n} H_1^{2m-2},$$

$$F_2 = \frac{p^4}{2} (1 - r) \left\{ e^{-kt} + 2 \sum_{1}^{\infty} \frac{(-1)^n p^{4n} e^{-(2n+1)kt}}{(2n+1)! (2n+2)!} \prod_{1}^{n} H_1^{2m-1} \right\},\,$$

$$F_3 = ktF_1 + \sum_{1}^{\infty} \frac{(-1)^n p^{4n} e^{-2nkt}}{2n!(2n+1)!} \left[ \sum_{1}^{\infty} \frac{I_2^{2n}}{I_1^{2n}} \cdot \prod_{1}^{n} H_1^{2m-2} \right] +$$

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On the solution of a differential . . . S/140/62/000/004/008/009

$$+4r\sum_{\frac{1}{2}}^{\infty}\frac{(-1)^{n}p^{4n}e^{-2nkt}}{2n!(2n+1)!}\sum_{\frac{1}{2}}^{n}\frac{(n-1)}{H_{1}^{2n-2}}\cdot\prod_{\frac{1}{2}}^{n}H_{1}^{2m-2},$$

$$F_4 = ktF_2 + e^{kt} + (1-r)\sum_{1}^{\infty} \frac{(-1)^n v^{4(n+1)} e^{-(2n+1)kt}}{(2n+1)!(2n+2)!} \times$$

$$\times \left[\sum_{1}^{n} \frac{I_{2}^{2n+1}}{I_{1}^{2n+1}} + 2r \sum_{1}^{n} \frac{(2n-1)}{H_{1}^{2n-1}}\right] \prod_{1}^{n} H_{1}^{2m-1}.$$

where the notations

$$I_1^m = \frac{1}{m^2(m^2-1)}, I_2^m = \frac{2(2m^2-1)}{m^3(m^2-1)^2}, H_1^m = (1-m^2r), r = \frac{bk^2}{a}, p^4 = \frac{a}{k^4}$$
 (4)

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On the solution of a differential ...

are used. If b = 0, then the  $F_i$  can be represented by Thomson functions.

ASSOCIATION: Moskovskiy aviatsionnyy institut im. S. Ordzhonikidze

(Moscow Aviation Institute im. S. Ordzhonikidze)

SUBMITTED:

July 29, 1959

Card 4/4

AUTHOR: Bershteyn, I.L. and Sibiryakov, V.L.

109-7-17/17

AUTHOR: Bershteyn, 1.1. and Sitiryakov, v.

Phase Method of Stabilization of Micro-wave Oscillators.

(Fazovaya stabilizatsiya mikrovolnovykh generatorov)

(Letter to the Editor)

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PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol.II, No.7, p. 944 (USSR).

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ABSTRACT: An experimental investigation of a klystron generator operating at 3.3 cm wavelength was carried out. The source of the stabilising oscillations was a quartz crystal oscillator with a frequency-multiplier operating at 450 Mc/s. The twentieth harmonic of this frequency was used to produce 60 Mc/s beats with the klystron frequency. The beats were amplified and then combined in a balanced detector with a separate local oscillator operating at 60 Mc/s. The output voltage of the balanced detector was amplified and applied to the reflector of the klystron. The above system permitted the stabilisation of the klystron over a frequency range of about 5 Mc/s. The power of the stabilising signal was about 0.4 μW. There are 2 references, l of which is Slavic.

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TITLE:

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AUTHORS: Bershteyn, I.L. and Sibiryakov, V.L. 109-3-2-21/26

TITLE: Phase-type Automatic Frequency Adjustment in Microwave Oscillators (Fazovaya avtopodstroyka chastoty generatorov

santimetrovykh voln)

FERIODICAL: Radiotekhnika i Elektronika, 1958, Vol.III, No.2, pp. 290 - 291 (USSR)

ABSTRACT: The problem was investigated experimentally by means of the equipment shown in the figure on p.290. This employed a quartz stabilised oscillator operating at 75 Mc/s; this was followed by two frequency multiplier stages producing a frequency of 450 Mc/s. The resulting signal was applied to a germanium diode and its twentieth harmonic, having a frequency of 9 000 Mc/s, was used as the standard synchronisation signal. The synchronising power was of the order of 1 µW and the frequency of the synchronised klystron was about 75 Mc/s lower than that of the standard. The standard signal and the klystron oscillations were applied to the input of a balanced detector; an intermediate frequency of 75 Mc/s, obtained at the output of the detector, was amplified and applied to another balanced detector, where it was mixed with the frequency of the quartz oscillator. The detector was followed by a singleCardl 2